



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

lu

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,139	07/29/2003	Shigeru Honjo	500.42983X00	5422

20457 7590 12/21/2004

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER

NGUYEN, KIET TUAN

ART UNIT PAPER NUMBER

2881

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/628,139	Applicant(s) HONJO ET AL.	
	Examiner Kiet T. Nguyen	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20041214</u> . | 6) <input type="checkbox"/> Other: ____ |

Objected Informalities

The disclosure is objected to because of the following informalities:

In The Claims

Claim 6, line 2, "said value of m/z is" should be changed to – said values of m/z are --.

Claim 7, line 2, "said value of m/z is" should be changed to – said values of m/z are --.

Claim 14, line 4, "37a" should be deleted.

Claim 14, line 6, "37b" should be deleted.

Appropriate correction is required.

Rejection Under 35 U.S.C. 102(e)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 8-12 and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Takada et al. (6,639,215).

Takada et al. (6,639,215) disclose, in figs. 1-11, a mass spectrometer using an atmospheric pressure chemical ionization for analyzing a chemical sample (see col. 1, lines 6-9) such as hazardous material (see col. 6, lines 30-31). The spectrometer

includes an ion source 39 including a needle electrode 37 and an opposite electrode 38 having an aperture for generating corona discharge; a sample introduction unit 36 for introducing the chemical sample from the opposite electrode 38 to the needle electrode 37 (see fig. 3 and 9), thereby ions generated by an ionizing reaction of the sample with primary ions are sent through the opening of the opposite electrode 38 to the mass spectrometer; the mass spectrometer 7 for analyzing the mass of ions; a detector 25 for detecting the analyzed ions and deciding whether the chemical substances of the sample to be detected; a data processor 30 for storing a data base having a value of m/z for ions; voltage sources 15 and 16 for applying a different voltage to an entrance electrode 10a and an outlet electrode 10b of a differential exhaust portion 13; and a vaporizing block 35 for heating and vaporizing the chemical sample.

Rejection Under 35 U.S.C. 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6-7 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takada et al. (6,639,215) in view of Bartram et al. (6,537,382).

Takada et al. (6,639,215) disclose all the features as discussed above except the values of m/z being 99 and 141 as recited in claim 6; the decision made by at least two of the values of m/z having 99, 183 and 365 as recited in claim 7; the temperature of the ion source set at 150 °C or lower as recited in claim 13; a drift voltage of 30V to 90V as recited in claim 14; and isopropyl methylphosphonofluoridate or pinacolyl methylphosphonofluoridate as recited in claim 15.

Bartram et al. (6,537,382) disclose a method for toxic chemical agents. The method also includes using a mass spectrometer for detecting isopropyl methylphosphonofluoridate and pinacolyl methylphosphonofluoridate (see col. 4, lines 38-53 and col. 14, line 2 to col. 15, line 18), thereby the values of 99, 141, 183 and 365 of m/z of ions are considered to be inherent in the spectrum of the detected isopropyl methylphosphonofluoridate and pinacolyl methylphosphonofluoridate, thus would have been obvious to one skilled in the art to use the Takada et al. (6,639,215) mass spectrometer for detecting the isopropyl methylphosphonofluoridate and pinacolyl methylphosphonofluoridate as Bartram et al. (6,537,382) suggested; since the mass spectrometer is well known in the art used to detect chemical agents.

Selecting at least two of the values of 99, 183 and 365 of m/z of ions for deciding whether chemical agent to be detected is considered to be obvious variation in design,

since the chemical agent is composed of a plurality of elements, thus would have been obvious to one skilled in the art to select the at least two of the values of 99, 183 and 365 of m/z of ions in the Takada et al. (6,639,215) for deciding whether chemical agent to be detected.

Setting the temperature of the ion source at 150 °C or lower is considered to be obvious variation in design, since each sample having a different temperature used to generate ions, thus would have been obvious to one skilled in the art to set the temperature of the ion source at 150 °C or lower in the Takada et al. (6,639,215) for generating ions, as Takada et al. (6,639,215) disclosed setting the temperature of the ion source at 180 °C for methanol.

Applying the drift voltage of 30V to 90V to the electrodes of the exhaust portion is considered to be obvious variation in design, since the different voltage between the electrodes of the exhaust portion is well known in the art to accelerate ions into the mass spectrometer, thus would have been obvious to one skilled in the art to apply the drift voltage of 30V to 90V to the electrodes of the exhaust portion in the Takada et al. (6,639,215) for accelerating the ions into the mass spectrometer, as Takada et al. (6,639,215) disclose applying a different voltage by the voltage sources 15 and 16 to the electrodes of the exhaust portion 13 (see fig. 2) for accelerating the ions into the mass spectrometer.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Messier et al. (6,727,400) disclose using the mass spectrometer for detecting pinacolyl ethylphosphonofluoridate;

2) Ohta et al. (6,770,877) disclose a mass spectrometer apparatus for detecting explosive material; and

3) Nakashige et al. (6,806,450) disclose a mass spectrometer apparatus for detecting hazardous material.

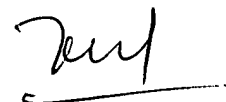
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet T. Nguyen whose telephone number is 571-272-2479. The examiner can normally be reached on Monday-Friday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KN



KIET T. NGUYEN
PRIMARY EXAMINER